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| 10/643,164  | 08/18/2003  | Jonathan E. Greene   | 102323-0130                     | 3585                        |
| 21125 7590 09/11/2007<br>NUTTER MCCLENNEN & FISH LLP<br>WORLD TRADE CENTER WEST<br>155 SEAPORT BOULEVARD<br>BOSTON, MA 02210-2604 |             |                      | EXAMINER<br>DO, CHAT C          |                             |
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/643,164  
Filing Date: August 18, 2003  
Appellant(s): GREENE, JONATHAN E.

**MAILED**

**SEP 07 2007**

**Technology Center 2100**

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Jonathan E. Greene  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 08/02/2007 appealing from the Office action mailed 01/04/2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 60-61 were rejected under 35 U.S.C. § 101 since the claims 60-61 are directed to non-statutory subject matter.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 60-61 are rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter.

Claims 60-61 cite a system for performing a FFT according to a mathematical algorithm. In order for claims to be statutory, claims must either include a practical/physical application or a concrete, useful, and tangible result, regardless the claims are implemented in general purposes hardware or software. However, claims 60-61 merely disclose steps/components for performing a FFT in a general computer

comprising one or more processors without further disclosing a practical/physical application or a useful and tangible result since the claims appear to preempt every substantial practical application of the idea embodied by the claim and there is no cited limitation in the claims that breathes sufficient life and meaning into the preamble so as to limit it to a particular practical application rather than being so broad and sweeping as to cover every substantial practical application of the idea embodied therein. Claims 60-61 disclose purely mathematical and abstract idea. Therefore, claims 60-61 are directed to non-statutory subject matter.

**(10) Response to Argument**

Discussion of the rejection of claims 60-61 under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

The applicant argues in pages 10-12 for claim 60 that the claim 60 provides a useful, concrete, and tangible result by providing some comparable Court case in *Alappat; Arrhythmia Research Technology Inc v. Corazonix Corp.*, 958 F.2d 1053, 22 U.S.P.Q.2D (BNA) 1033 (Fed. Cir. 1992); and, *State St. Bank of Trust Co.*, in which the Court favors a claim to be statutory if event the result is merely a set of numbers. The applicant further highlights that claim 60 recites a computer system that uses hardware component to generate a series of value representing values of coefficients without need for additional processing. Finally, the applicant argues that claim 60 provides a final result as output are useful, concrete, and tangible wherein useful as the ordered outputs

are specific; concrete as consistently produce ordered transformed outputs; and tangible as it is a real world result in the form of outputs that are ordered.

The examiner respectfully submits that the Court case in *Alappat; Arrhythmia Research Technology Inc v. Corazonix Corp.*, 958 F.2d 1053, 22 U.S.P.Q.2D (BNA) 1033 (Fed. Cir. 1992); and, *State St. Bank of Trust Co.*, does not apply to the “exact” scenario as seen in the present application. In general, claim 60 is claiming a system having software sub-routines executing by one or more vector processors for performing a Fast Fourier Transform (i.e. Fast Fourier Transform is well-known mathematical transform in the art of technology) wherein software sub-routines are executed to perform a first loop means and a second loop means as in the non-final stage calculating means and final stage calculating means as seen in the claim. The output of the system is just a mathematical transformation of the input number, which is done in a general vector processors. The examiner found nowhere within the claim a specific practical/physical application or a concrete, useful, and tangible “result” as required under 35 U.S.C. § 101. Without a specific practical/physical application or a concrete, useful, and tangible “result” as required, the claim 60 appears to preempt every substantial practical application of the idea embodied by the claim (e.g. Fast Fourier Transform) and there is no cited limitation in the claims that breathes sufficient life and meaning into the preamble so as to limit it to a particular practical application rather than being so broad and sweeping as to cover every substantial practical application of the idea embodied therein. The examiner partially agrees with the applicant that claim 60 does provide a useful and concrete subject matter, but it fails to produce a tangible result or a practical

application as required. The final output is just another transformed number of input number. The final output cannot constitute as the tangible result or the real world result since the final output is just an output number without further disclosing the intended use.

The applicant further argues in pages 13-14 for claim 60 that claim 60 provides a physical structure comprising a specific hardware structures, namely, vector processors for performing software means functions including a first loop means, second loop means, non-final stage calculating means, and final stage calculating means. The applicant also argues in page 14 that the vector processor is defined in the applicant previously argument as a hardware to configure to execute a specific task so as to generate tangible results.

The examiner respectfully submits that claim 60 does not provide a physical structure as alleged by the applicant. The claim only discloses system having vector processors configured to perform a set of calculation means by software sub-routines. The claim does not disclose any specific or particular hardware for performing Fast Fourier Transform, but rather merely general vector processor. Further, vector processor is a well-known and widely used hardware general processor for performing multiple data simultaneously as defined by Wikipedia "Vector processors were common in the scientific computing area, where they formed the basis of most supercomputers through the 1980s and into the 1990s" at [http://en.wikipedia.org/wiki/Vector\\_processor](http://en.wikipedia.org/wiki/Vector_processor).

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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Chat C. Do

AU 2193

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